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ABSTRACT

This is an evaluation of the fifth year of a Title VII bilingual/bicultural program that was conducted for Chinese speaking students at a New York City High School. A demographic analysis of the school's neighborhood (Manhattan's Lower East Side) and a discussion of participating students' characteristics are provided. The project's philosophy, organization and structure are described. Instructional components of the program are reviewed including: (1) student placement; (2) English as a second language; (3) native language classes; (4) bilingual classes; (5) transition to mainstream classes; and (6) funding of the instructional component. Non-instructional components covered include: (1) curriculum development; (2) supportive services; (3) staff development; (4) parental and community involvement; and (5) affective domain. Tables provided show students' performance and achievement in reading, mathematics, science, social studies, and native language skills, and also document student attendance figures. It is concluded that the program achieved its overall goals in the areas of student academic performance, bicultural coping skills, mainstreaming, and the development of effective student/staff parent relations. A number of recommendations for extending the program are offered. (APM)

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FINAL EVALUATION REPORT

SEWARD PARK HIGH SCHOOL

CHINESE BILINGUAL - BICULTURAL PROGRAM

ESEA TITLE VII

PROJECT 5001-42-07605

NYS CHAPTER 720

PROJECT 5001-42-08406

1979-1980

NEW YORK CITY PUBLIC SCHOOLS

OFFICE OF EDUCATIONAL EVALUATION

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FINAL EVALUATION REPORT
SEWARD PARK HIGH SCHOOL
CHINESE BILINGUAL - BICULTURAL PROGRAM

ESEA TITLE VII
NYS CHAPTER 720
1979-1980

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SEWARD PARK HIGH SCHOOL

CHINESE BILINGUAL-BICULTURAL PROGRAM

Year of Operation: 1979-1980, fifth year of funding

Target Language: Chinese (Chinese speaking staff members have knowledge of the following languages/dialects; Cantonese, Mandarin, Toyshanese, Fukienese, Shanghainese and Tagalog.)

Number of Participants: 400 Chinese students of limited English speaking ability;
50 English-dominant students

Grades: 10-12

Number of Staff Personnel in Program: Title VII - 12
Chapter 720 - 4

Principals: Mr. Rubin Maloff
Dr. Noel N. Kriftcher (Feb. 1980-)

Project Director: Mrs. Fay Loo

I. DEMOGRAPHIC CONTEXT

The Chinese Bilingual-Bicultural Program operates at Seward Park High School, located on Manhattan's Lower East Side. The school is accessible by bus and subway lines, but most students live in the attendance area and walk to school.

The attendance area encompasses a section of "Chinatown"; it is characterized by tenement housing, stores and small businesses, and is in general a low-income area.

When the program was initially undertaken, needs assessment was based on an estimated 60 thousand Chinese residents in the community, of whom 55% had emigrated since 1965. More recent figures, which reflect the influx of immigrants from China and Southeast Asia during the last decade, conservatively estimate that 150,000 Asian residents inhabit the area. The new Asian community includes immigrants from Hong Kong and Taiwan, as well as those who came from the People's Republic of China (hereafter referred to as P.R.C.), from Vietnam, and from other parts of Southeast Asia. These newly arrived immigrants live for the most part within a self-contained Asian community; within that community and at home, program students use their native languages almost exclusively.

The school's attendance area is also inhabited by Hispanic and Italian residents. Since the influx of recently arrived Asian families, the population in the area has become somewhat less stable. Many of the Italian and Jewish residents are moving out of the area as the Chinese move in.

II. STUDENT CHARACTERISTICS

A. Target Population:

The Chinese Bilingual-Bicultural Program is designed to offer instruction and supportive services to Chinese and other Chinese-speaking Asian high school students of limited English ability.

The target population in 1979-1980 consisted of approximately 400 Chinese and other Chinese-speaking Asian students in grades 10 through 12; an additional 50 English-dominant students participated in the program in order to benefit from the cross-cultural material presented by the Cultural Specialist, as well as from instruction in native culture, and supportive and extra-curricular activities.

The overall enrollment at Seward Park High School as of April, 1980 was 3,176 of whom approximately 45% were non-English-dominant. Of the school's 850 Chinese and other Asian students, 500 (or nearly 60%) were of limited proficiency in English as defined by the Language Assessment Battery (LAB), while nearly all were eligible for Title VII programming as defined by parents' language.

Funding limited the target population to 450 students--400 non-English-dominant and 50 English-dominant. As the figures indicate, the Program did not serve the total number of Chinese and other Asian students who were in need of bilingual services. This is due at least in part to the rapidly increasing enrollment of Asian students. During 1978-1979, 199 Chinese LEP students were newly enrolled in the school; that figure increased to 334 in 1979-1980. There has been a corresponding increase in the school's overall population. While growth in enrollment had been projected for 1979-1980, administrators had expected a total student

body of 3,051; the actual enrollment in April, 1980 surpassed that figure by 125, and was theoretically larger than the school could accommodate. Due to overcrowding and a general strain on the school's resources, the administration found it necessary to refuse admittance to new students wishing and needing to participate in the Bilingual Program for the remainder of the semester. The sharp increase in the enrollment of Chinese immigrant students has intensified the need for expanded supportive services.

B. Diversity:

The target population was characterized by marked diversity. Program students, all of whom were ethnic Chinese, represented a range of educational background, national origin, socioeconomic status, and general experience. The majority of Program students came from the Kwangtung Province of China, and spoke the Cantonese dialect. As of February, 1979, the 451 participants had the following places of origin:

	Ongoing Students	New Entrants (Feb. 1979)
Hong Kong	215	17
P.R.C.	43	61
Burma	29	3
Taiwan	16	6
Vietnam	10	15
English-dominant students and Other	32	4
	345	106

The figures given above suggest the general immigration pattern in the attendance area. There has been a decrease of new immigrants from Hong Kong and Taiwan, and expanded immigration from P.R.C. and Vietnam. Students from those countries, who have experienced political upheaval and/or war, social disruption, and personal loss, tended to have greater difficulty in adjusting to their new setting, and to the cultures and languages of New York City. Furthermore, they are less familiar with English than students who have come from Hong Kong or Taiwan, and have greater difficulty with the curriculum of the American school system.

There is consequently a broad spectrum of proficiency and preparedness in content areas. Students from P.R.C. experienced the greatest difficulty in academic and attitudinal areas. American History, Economics, and World History proved to be most frustrating and confusing. They also demonstrated some problems in grasping the material presented in Science classes, but were for the most part well equipped in Mathematics.

C. Entry Criteria:

Participating students were selected on the basis of limited proficiency in English, and the consequent inability to cope with content area studies (Science, Mathematics, Social Studies) in classes taught exclusively in English.

The selection process typically included the following:

1. Interview by a Guidance Counselor and Admission Officer;

2. Testing and evaluation for English placement by the ESL Chairperson or the English Chairperson. This evaluation involves

department-developed oral and written tests, as well as the Language Assessment Battery (LAB).

3. Testing for Chinese level by Chairperson of Foreign Language Department.

4. Evaluation by the Chinese Bilingual Department of Chinese students who are not prepared for mainstream classes. The Program Coordinator and/or Bilingual Guidance Counselor make recommendations based on the interview, which is conducted in the student's native dialect, as well as on test results and assessment of previous educational records.

5. Placement interviews and tests administered by the chairpersons of the content area departments.

Final placement is coordinated by the Chinese Bilingual Department, and implemented by the school's Program Office.

III. PROGRAM DESCRIPTION

A. Philosophy:

The evaluator spoke with the Program Coordinator, Guidance Counselor, Teachers, and Paraprofessionals, as well as with the school's Principal and Assistant Principal. There was general consensus that bilingual education is crucial for the program's target population, which constitutes students who typically have little or no familiarity with the culture and language (or even, in many cases, with the alphabet), and who would flounder without bilingual instruction and support. Because the time period required for these students to function effectively in classes conducted exclusively in English is significantly more than a year, students would otherwise lose valuable time in terms of progress in content areas. Program personnel noted that most entering students

lack confidence and discipline; their experience has left them little peace of mind, and they often have little tolerance for frustration. Therefore, the more individualized attention given within the context of the program is critical.

Both Program personnel and school administrators view the program as transitional, and support the use of English in every classroom. The Mathematics Paraprofessional noted that instruction in English consumes about two-thirds of bilingual Math classes. Social studies classes are primarily conducted in the native language, but homework assignments are most often required to be in English; this forces students to acquire and utilize new vocabulary to express or elaborate on the concepts they have learned in class. In general, the program aims at equipping students to join the appropriate mainstream classes with confidence, and to continue their education after graduation, and/or to enter the working world equipped with fundamental skills, a familiarity with the literature of two cultures, and with practical skills and knowledge. (For amplification, see the section on Transition.)

The Bilingual Program has the following overall objectives:

1. To enable Chinese students of limited English ability to read and write effectively in both languages, and to facilitate learning in content areas.

2. To improve attendance and decrease the incidence of dropping-out among Chinese and Asian students.

3. To motivate a greater number of students to continue their

education.

4. To reinforce cultural identity, and to enable English-dominant Chinese and other Asian students to understand the traditions and customs of their communities so that a cross-cultural dialogue may be established.

5. To promote positive attitudes toward responsible citizenship.

6. To enhance and increase positive parent/community participation in the educational experience of Chinese and other Asian students.

7. To encourage utilization of community resources.

8. To encourage bilingual staff members to upgrade their skills in teaching bilingual students through the development and use of bilingual materials and curricula.

B. Organization/Structure:

1. History: The Seward Park Chinese Bilingual-Bicultural Program was initiated in 1975; 1979-1980 was its fifth year of operation, and its final year of the current funding cycle. The program at Seward Park High School was the first Chinese high school bilingual program to be federally funded in the country; it has served as a consortium for Chinese and other Asian-tongue students of limited English-speaking ability on the East Coast.

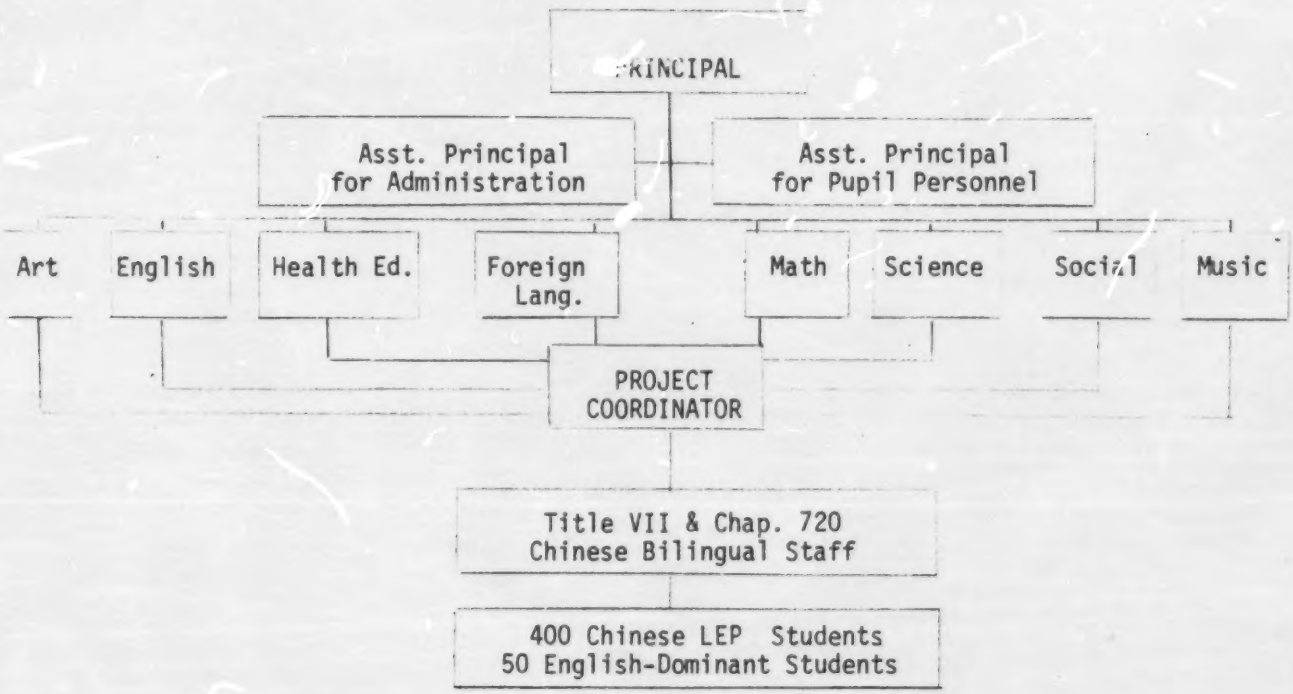
Over the five years of the Programs' existence it has undergone few structural changes. Several staff members, including the Project Coordinator, have been with the Program since its inception, providing the Program with a certain stability and continuity in its efforts.

Those changes that have taken place have for the most part been in response to the increasing numbers of incoming students and to variations in their academic preparedness.

2. Structure: There is close coordination between the Chinese Bilingual Department, within which the program functions, and other content area departments of the school.

CHART I

Administrative Organization
Seward Park Bilingual-Bicultural Program



The Principal and Assistant Principal, and the Social Studies department Chairperson, were found to be very supportive of the program. The Principal particularly endorsed the Program's stress on transition, and the use of Chinese and English in its classes. There is an effective working relationship among departments, and between Program and tax-levy teachers who work

with Program students. In general, the Program was well organized.

IV. INSTRUCTIONAL COMPONENT

A. Overview:

The Chinese Bilingual-Bicultural Program was designed to provide Chinese and other Chinese-speaking Asian students, who are of limited proficiency in English, with: intensive instruction in ESL, instruction in the native language; classes in content areas; and reinforcement of cultural identity. Numerous bilingual classes are offered; where bilingual instruction is not available, Program personnel, including Paraprofessionals, provided translations and support to help students adjust to the educational system and to achieve in academic areas. Program students also received instruction in other subject areas with the mainstream population of the school. Through these classes, and through participation in lunchroom and assembly programs, the participants were integrated into the school population as a whole.

B. Student Placement:

Once students were identified as eligible for program participation and selected for entry, they were individually programmed. The Chinese Bilingual Department conducted oral interviews in the students' native dialects; the Program Coordinator and Bilingual Guidance Counselor then assessed test results and previous educational records (if available). The Chairpersons of the Social Studies, Mathematics, Science, and Foreign Language departments also conducted placement interviews and testing, and had input into the programming process. Finally, the Chinese Bilingual Department coordinated the placement and programming for each student; its recommendations were then implemented by the school's Program Office.

Each student's program consisted of: intensive instruction in ESL and/or transitional English, the content areas of Math, Science and Social Studies; and mainstream courses, including physical education, art, and electives.

C. English as a Second Language:

ESL was offered on four levels. Students at levels I and II received a total of three 40-minute periods of ESL each day; two of these periods were spent in a Title I ESL class, and one in a coordinated tax-levy class. The tax-levy program was geared to the needs of ESL students, and was transitional between ESL and mainstream English classes. Approximately one-third of Program students took ESL (I-IV); two-thirds took Transitional English (Levels III-VIII).

D. Native Language Classes:

All Chinese Bilingual Program students, on the basis of their scores on a teacher-made test, were individually placed into tax-levy classes in the Chinese language. A three-year sequence of classes, Chinese 1-6, was offered by the Foreign Language Department.

E. Bilingual Classes:

In 1979-1980 the Bilingual Program offered a total of 26 classes taught in Chinese and English as presented in Table I.

TABLE I

Bilingual Course Offerings (Spring, 1980)

CONTENT AREA	TITLE	NO. CLASSES	REGISTER
Mathematics	Pre-Algebra	1	48
	Algebra I	2	83
	Algebra II	2	78
	Geometry I	1	36
	Geometry II	1	39
Science	General Science I	2	65
	General Science II	3	113
	Biology A	3	107
	Biology B	2	36
	Biology C	1	37 (Fall)
Social Studies	Social Studies Fundamental I	1	90
	Social Studies Fundamental II	2	61
	World History I	2	74
	World History II	2	32
	American History I	1	42
	American History II	1	26
	Economics	1	45

Each bilingual class met five times per week for one 40-minute period. Some bilingual content area courses were taught by tax-levy English-dominant teachers; in these cases, one or more Paraprofessionals provided support, translated materials, and explanations of concepts presented in English.

The evaluator observed a Math class which was taught by a monolingual English-speaking teacher assisted by a Chinese-speaking Paraprofessional. The teacher did refer to some mathematical terms in Chinese (Cantonese dialect), which pleased the students and seemed to motivate them. The students in this class appeared able to absorb material quite rapidly; many of them used English in the class with some confidence. In Math, students typically progressed rapidly if the terminology is explained fully and clearly in one or both languages. In the more fundamental courses, about 80% of the texts which explain basic concepts had to be translated into the native language, since the student's comprehension of English was minimal.

At more advanced levels, less translation was needed: students taking these classes had typically spent one-and-a-half or more years studying English.

In Social Studies classes students were aided by a bilingual teacher who came from Chekiang, and is studying the Cantonese dialect to communicate more effectively with the students. A Paraprofessional helped by furnishing translations of concepts covered in class, translating highlights of the texts, preparing questions for exams in Chinese, and explicating passages and concepts which were particularly difficult. There was close cooperation with monolingual teachers of Social Studies.

Program students took mandatory subjects as well. All participated in physical education and art classes with mainstream students. The majority also took elective subjects, including practical nursing, accounting, home economics, and typing (in Chinese and English).

F. Transition:

In general, transition was emphasized in the instructional program; teachers and students alike view the program as a means of giving students the skills and the confidence to enter mainstream classes. Content area classes were taught in English and the native language, as described above. The transition process was gradual; as students were mainstreamed, they continue to take some classes and receive supportive services from the Program.

The number of students who were fully mainstreamed or completely exited the Program was minimal. Although progressing well in math and science competence, most students were not able in less than three years to achieve the level of English mastery necessary to understand Social Studies concepts without bilingual assistance. Twelfth year

students for the most part remained in bilingual American History and Economics classes, and continued to receive guidance and supportive services from the Program.

The evaluator interviewed five students enrolled in Bilingual Biology class. All expressed a desire to enter mainstream classes:

Student A: arrived from P.R.C. one year ago. She had graduated from high school there, but felt deficient in several subject areas. She shies away from using English.

Student B: thinks the program is very helpful, particularly since he finds English very difficult. He felt that bilingual teaching in Math and Science gave him confidence in following class lessons.

Student C: left P.R.C. and spent three months studying in Hong Kong before arriving in the U.S. She feels that the Bilingual Program has helped her, but finds that she is more confident now, and wishes to join mainstream classes. She commented that some students tend to rely on the Chinese teaching by paying attention only to the Chinese teachers and neglecting the subject matter introduced in English. She said she does not want to become reliant on Chinese because she wants to pursue a college education without bilingual assistance.

Student D: came from Canton, P.R.C. about 6 months ago. She had been in the first year of high school in Canton, and found that she could catch up in Math and Science, but could not manage History. She felt that the U.S. high school does not sufficiently challenge the students.

Student E: had graduated from high school in P.R.C. He is in the 10th grade at Seward Park, after being in the U.S. for just over a year. He feels that he needs History instruction in the bilingual program, and to a lesser degree in Biology and Math. He said that at first he had trouble concentrating in class, but that it is easier now. He is doing fairly well.

G. Funding of Instructional Component:

The personnel and funding sources of the instructional component of the Bilingual Program are found in the following table. New York State Chapter 720 funds provided one Math teacher during the first semester and one Social Studies teacher during the second semester, as well as 2.5 Paraprofessionals.

Instructional Component	Funding Source(s)	Number of Personnel: Teachers	Paras	
E.S.L.	Title I PSEN	5	2	
Reading Communication Arts (English)	Tax Levy	4	-	
Native Language	Tax Levy	2	-	
Math	Tax Levy Chapter 720	7* .5		
Social Studies	Tax Levy Chaper 720	8* .5	5	Title VII Chapter 720
Science	Tax Levy	7*		

*These figures represent the actual number of instructors teaching in the Program on a part-time basis.

V. NON-INSTRUCTIONAL COMPONENT

A. Overview:

Non-instructional services were provided by the following Title VII personnel:

Curriculum Development:	Cultural Specialist Curriculum Specialist Paraprofessionals (translation)
Supportive Services:	Bilingual Guidance Counselor Cultural Specialist(Grade Advisor) Family Assistant Program Coordinator
Staff Development:	Program Coordinator Cultural Specialist
Parental and Community Involvement:	Program Coordinator Cultural Specialist Bilingual Guidance Counselor
Administration:	Program Coordinator

B. Implementation:

1. Curriculum Development: The need for translations of English texts into Chinese or other Asian languages has been increasing, since

entering students have recently arrived with minimal preparation in English, and with educational experiences disrupted by political upheaval and economic difficulty.

The Curriculum Specialist (who specialized in Mathematics and Computer Science) noted that in some courses, up to 80% of the curriculum materials must be translated. She added that she does not want the development of texts in the native language to discourage students from learning English, and that she encourages students to use English texts as much as possible.

Translations were prepared by the Curriculum Specialist, Paraprofessionals, and the Cultural Specialist. The Cultural Specialist in addition, obtained books which have bilingual texts, particularly in the areas of fine arts and native culture.

During the five years of Title VII funding the Bilingual Program developed a comprehensive bilingual curriculum in the following areas:

1. World History I & II curriculum developed in English and Chinese.
2. Ninth Grade Algebra and 10th Grade Geometry curriculum developed in English and Chinese.
3. Biology I & II curriculum developed in English and Chinese.
4. Comprehensive Science glossary developed in English and Chinese.
5. Health Education glossary developed in English and Chinese.
6. A three-year comprehensive Chinese language arts curriculum developed in Chinese in conjunction with the State Department of Education and currently being printed.
7. A comprehensive guide to school rules and regulations,

services, credit requirements for graduation, etc., developed in Chinese.

8. A career guidance monograph developed in Chinese.

9. Daily lesson plans for World History, American History, Economics, Science and Math developed in English and Chinese--ongoing.

10. Citywide exams for Chinese Language Arts, Math and Science developed in cooperation with the Office of Bilingual Education and the State Education Department--ongoing.

Materials developed during 1979-1980 included the World History II, Algebra, and Biology I & II curricula, a revision of the Geometry curriculum, the Comprehensive Science and Health Education glossaries, and the career guidance monograph.

2. Supportive Services: Supportive services were provided primarily by the Bilingual Guidance Counselor and the Cultural Specialist (who acts as Grade Advisor), the Family Assistant, and to some degree by Paraprofessionals. They worked with students to resolve academic problems, to plan for the future, and to deal with difficulties which may arise in adjusting to the new and radically different environment in which the recent immigrants find themselves. They also attempted to help students with problems stemming from their families strained economic circumstances.

Some of the Paraprofessionals indicated that Program students, particularly recent entrants, had difficulty concentrating in class. They tended to have short attention spans, talk among themselves, distract other students, and try to cut classes. Students often became frustrated: some complained that they studied diligently but nevertheless received low marks on tests. The Paraprofessionals sometimes dealt with such problems by working with students on an individual basis.

The Guidance Counselor also dealt with students individually, and maintained files charting each student's adjustment and progress. He and the Family Assistant also conducted occasional home visits to consult with parents and assembled small groups of students who required additional assistance. The Guidance Counselor noted that the influx of Chinese and other Asian immigrants has created a demand for supportive services which exceeds the capacity of the present Program. He indicated that he needed more assistance in furnishing the needed services.

3. Staff Development: Intensive pre-service and in-service training, including university courses, comprised the Program's staff development component. The Program Coordinator conducted workshops for the Title VII personnel and content area staff on topics such as new materials and methods for bilingual instruction. Monthly meetings of Program staff dealt with issues of planning and coordination with other programs. In addition, the Cultural Specialist conducted workshops on special exhibits and topics in Chinese culture.

During 1979-80 Bilingual Program staff members received training at the following institutions of higher education:

Staff Member(s)	Training	Institution of Higher Education
Paraprofessional	Critical Issues in Twentieth-Century America	Touro College
Paraprofessional	Cantonese Dialect of the Kwangtung Province	China Institute in America
Paraprofessional	Math Teaching and Learning Calculus II	Teachers College Columbia University
Curriculum Specialist and Paraprofessional	2 Bilingual Curriculum Material Workshops	Fordham University

The success of this in-program training over the five years of the current funding cycle can be seen in light of the following staff achievements:

1. One Bilingual Chinese Guidance Counselor has achieved full certification.

2. One Bilingual Paraprofessional has attained an M.A. Degree in Bilingual Education.

3. One Bilingual Paraprofessional has attained an M.A. Degree in Asian Studies.

4. One Cultural Specialist became qualified to take examinations for a license in teaching ESL.

5. Two Bilingual Paraprofessionals became qualified to take the Bilingual Chinese Math exam.

6. One Bilingual Paraprofessional was qualified to take the Chinese Bilingual Social Studies exam.

7. One Bilingual Paraprofessional became a bilingual teacher at another high school.

During 1979-1980 the Program Coordinator attended numerous conferences and professional meetings, including:

The National Association for Bilingual Education
New York State ESOL-BEA, Buffalo
CLTA Chinese Language Association, Atlanta, Georgia
NAAPAE National Association of Asian/Pacific American Education, Washington, D.C.
Management conferences, Albany
Management Institute, Washington, D.C.
Workshops in Bilingual Education at the N.Y.C. Board of Education

Other members of the staff, including the Cultural Specialist, also attended professional meetings and conferences.

4. Staff Characteristics: Several members of the Title VII staff, including the Program Coordinator, Cultural Specialist, Curriculum Specialist, and Social Studies Paraprofessional, have worked with the program for five years (since its inception). The staff represents a broad range of interests and abilities. In terms of linguistic ability, they command the following languages and dialects: Chinese (Cantonese, Mandarin, Toyshanese, Shanghainese, Fukinese) and Tagalog. The Curriculum Specialist acquired expertise in Mathematics and Computer Science. The Paraprofessionals specialized in Mathematics, Social Studies, and Science, and were exceptionally well qualified.

One of the science Paraprofessionals, for example, had taught science on the college level in Hong Kong for 28 years.

5. Parent and Community Involvement: Parents of Program students participated actively in Program activities. This involvement was encouraged by the Program Coordinator and her staff. The parents generally held meetings on Sundays, either at the school or at the Chinese Consolidated Benevolent Association in Chinatown; many attended these meetings on a regular basis throughout the year. The group discussed such topics as: school regulations; the rights of students and parents; school reports and records. Parents were also invited to attend workshops on bilingual education offered by the Program Coordinator.

The Bilingual Guidance Counselor kept in close touch with parents, particularly those whose children were experiencing difficulty in adjusting to the school's academic and social environment. Home visits were made on occasion. This contact proved crucial to the Program's function, since Chinese and other Asian parents adhere to a traditional attitude that once they go to school, students are in the hands of teachers. Unfamiliar with the American system, parents relied on the Guidance Counselor for information about their children's progress, as well as for information about the availability of counseling services and events at the school, and for explanations of placement procedures, report cards, and graduation requirements.

The Program staff made a concerted effort to involve the community in its activities. The Cultural Specialist was largely responsible for planning and promoting cultural activities, including the annual China Night. She edited the program's newsletter, supervised the production and distribution of news releases, and produced program posters. She also maintained a

bulletin board on native arts. The Cultural Specialist formed a Chinese Cultural Club. When the school held a street fair in May, Program students took part in this community event by demonstrating Chinese and other Asian arts, such as paper cutting and Tai Chi Chuan.

C. Affective Domain:

In general, the students were supportive of the Program. One Paraprofessional noted that in the past, some students--particularly those who come from Hong Kong--were dissatisfied with the Program and tended to complain about it. But she added that recently they have been more positive, particularly since they have realized that in the absence of the Bilingual Program, they would in all probability lose a year or more in the educational process.

Students eagerly participated in extracurricular activities, including: the Cultural Club; folk dance; Tai Chi Chuan; and Chinese tumbling. They also took part in field trips, including a trip to Albany.

Attendance rates of Program students have been consistently excellent, with over 96% of the Program students exceeding the school-wide attendance rate this year. The Project Coordinator noted that Program students are in general highly academically motivated, as these attendance rates demonstrate.

Although the Bilingual Language Office was robbed twice, there was little vandalism. There have been no suspensions among Program students.

There has been a high rate of success among graduates of the Program. Statistics assembled in January 1980 indicated that of 326 recent graduates, 181 entered four-year colleges, 72 entered two-year colleges, 50 found employment, 19 received further vocational training, and 4 joined the armed forces.

VI. FINDINGS

Assessment Procedures and Findings:

The following section presents the assessment instruments and procedures, and the results of the testing.

Assessment Procedures and Instruments:

Students were assessed in English Language development, growth in their mastery of their native language, mathematics, social studies and science. The following are the areas assessed and the instruments used:

English as a Second Language	--	Criterion Referenced English Syntax Test (CREST)
Reading in English	--	New York City Reading Test
Mathematics Achievement	--	NYC Arithmetic Computation Test, Mixed Fundamentals Subtest.
Mathematics Performance	--	Teacher-made tests
Science Performance	--	Teacher-made tests
Social Studies Performance	--	Teacher-made tests
Native Language Arts Performance	--	Teacher-made tests
Attendance	--	School and Program records

A) To assess growth in English language reading achievement, a "norm referenced" evaluation model was applied to the observed raw score distributions at each grade level. This model compares the observed achievement level of program students to an expected average achievement level. The expected achievement level corresponds to the theoretical level of achievement that would have occurred in the absence of instructional intervention.

The difference between expected and actual (observed) achievement was compared for significance.

1) Statistical Significance was determined through the application of the correlated t-test model. This statistical analysis demonstrates whether the difference between pre-test and post-test mean scores is larger than would be expected by chance variation alone; i.e. is statistically significant.

2) Educational Significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen.[1]

[1] Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977 Chapter 2.

An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size indices are recommended by Cohen as guides to interpreting educational significance (ES):

a difference of 1/5 = .20 = small ES

a difference of 1/2 = .50 - medium ES

a difference of 4/5 = .80 = large ES

B) On the Criterion Referenced English Syntax Test (CREST) information is provided on the number of objectives attempted and mastered, the percentage of objectives mastered versus those attempted, and the number of objectives mastered per month of treatment. Information is also provided on student performance on the various test levels.

C) The results of the criterion referenced tests in mathematics, social studies, science and native language arts are reported in terms of the number and percent of students achieving the criterion levels set for the participants (60% passing).

D) Information is provided on the attendance rate of students participating in the bilingual program compared with that of the total school population.

The following pages present student achievement in tabular form.

TABLE II

English as a Second Language

FALL

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
10	141	11.3	6.0	53%	3.3	1.8
11	25	8.1	3.4	42%	3.3	1.0
12	1	4.0	3.0	75%	3.3	0.9
Total	167	10.8	5.6	52%	3.3	1.7

The Fall performance on the CREST regardless of test level showed that from 4 objectives in grade 12 (1 student) to 11 objectives in grade 10 were attempted, and from 3 objectives in grade 12 to 6 objectives in grade 10 were mastered. The number of objectives mastered per month of treatment ranged from 0.9 in grade 12 to 1.8 in grade 10. The decreasing number of objectives mastered per month as grade level increases may be due to two factors: a natural selection out of the ESL program of students who are successful in learning English (only 25 remain at the eleventh grade and one in grade 12), and the increasing difficulty of objectives and test items in the higher levels of the CREST.

TABLE III

English as a Second Language

FALL

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
10	141	760	459	60%	789	373	47%	48	20	42%
11	25	-	-	-	57	37	65%	145	48	33%
12	1	-	-	-	-	-	-	4	3	75%
Total	167	760	459	60%	846	410	48%	197	71	36%

The grade by test level cross tabulation of Fall CREST performance revealed a tendency for students in lower grades to be functioning at lower test levels and higher grade levels to be working on higher test levels. Most students appeared to have mastered better than half of the attempted objectives.

TABLE IV

English as a Second Language

SPRING

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
10	197	11.2	6.0	54%	3.2	1.9
11	9	6.4	2.9	45%	3.1	.9
Total	206	11.3	6.0	53%	3.2	1.8

Spring performance on the CREST revealed that regardless of test level approximately half of the attempted objectives were mastered. When viewed from the point of view of mastery per time unit of instruction, students mastered approximately 1.8 objectives per month of instruction. Substantial differences exist between the performance of 10th and 11th graders. This may be an artifact of the selection factor, since only nine students at the 11th grade (the grade with the substantially lower performance) remain in the ESL sequence while the majority of 11th graders are enrolled in transitional English classes.

TABLE V

English as a Second Language

SPRING

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
10	197	958	526	55%	1004	529	53%	249	124	50%
11	9	-	-	-	12	6	50%	46	20	43%
12	--	--	--	--	NO DATA	--	--	--	--	--
Total	206	958	526	55%	1016	535	53%	295	144	49%

The grade by test level for Spring CREST testing showed that test level attempted depended primarily on grade level. In addition most students mastered over 50% of the objectives attempted.

TABLE VI

Reading Achievement

Significance of the Difference Between Expected and Actual Achievement for Students with Full Instructional Treatment on the NYC Reading Test, Forms A (Pre-Test), B (Post-Test)

Grade	N	Pre Mean	Pre S.D.	Post Mean	Post S.D.	Expected Mean	Mean Diff. Post-Exp.	Corr. Pre/Post	t	p	ES
11	44	27.0	5.9	27.0	6.9	28.0	-1.0	.99	-	-	-
12	22	24.8	4.9	31.1	6.9	23.0	8.1	.50	6.04	.001	1.32

Table VI shows the results of reading achievement in English for grades 11 and 12 on the NYC Reading Test, administered to high school students in PSEN programs, the State Title I equivalent. Grade 11 students showed decline in reading achievement when actual post-treatment achievement is compared to the expected achievement. However, this result is essentially uninterpretable in that a mean of 27 is within the limits of a probable chance score for the group. Hence, the achievement of grade 11 students was not reliably assessed. It is apparent that the instrument was too difficult for grade 11 students which possibly resulted in a large number of students guessing. Grade 12 students showed nonchance growth of 8.1 raw score points beyond expectation. This difference was one full standard deviation unit above the expected score that would have been obtained in the absence of the program. This gain was a highly significant level of growth, in statistical and educational units of analysis.

TABLE VI (Continued)

The expected mean of the 12th graders (23.0) was smaller than the pre-test mean. This expected average, which is derived from the percentile ranking corresponding to the observed pre-test mean, was observed to be equal to the 11th percentile in the norms. The lower expected mean as compared to the actual pre-test mean is most probably a result of two factors: the larger error of measurement observed at the lower ends of the distribution of most standardized achievement instruments, and the imperfect correlation between alternate forms of the test (different forms were administered at pre and post testing times).

One conclusion may be indicated on the basis of these results--the NYC Reading Test may not be a valid test to apply with Chinese-speaking students enrolled in transitional English classes, since large numbers of students were performing at levels which may be considered to be chance.

TABLE VII

Mathematics Achievement

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in Mathematics Achievement of Students with Full Instructional Treatment on the New York City Mathematics Test, Forms A(Pre-Test), B (Post-Test).

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	p	ES
11	45	30.2	9.1	33.1	9.1	2.9	.63	2.45	.01	.37
12	23	31.3	8.9	35.1	7.9	3.9	.49	2.15	.05	.45

Students in grades 11 and 12 made statistically significant gains on the NYC Mathematics Test. The gain for 11th grade students was 2.9 raw score points, and the gain for 12th grade students was 3.9. These gains, when expressed in standard deviation units, are of small to moderate educational significance. The pre/post correlations of .63 and .49 for 11th and 12th grade students respectively are smaller than expected in a test-retest situation with parallel forms of a standardized test instrument. The distributionof raw scores, for each grade level revealed a substantial number of students who scored at the top of the raw score scale. This indicates that the testing instrument possessed an inadequate upper level for measuring growth. The test was too easy for most students, the result of which was that true achievement gains were not possible for the majority of students.

TABLE VIII

Mathematics Performance

Number and Percent of Students Passing

Teacher-Made Examinations in Mathematics

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
10	173	148	86%	243	219	94%
11	57	47	83%	51	47	92%
12	20	19	95%	9	9	100%

In the Fall term, the percentage of students passing teacher-made examinations in Mathematics ranged from 83% in grade 11 to 95% in grade 12. In Spring, the percent mastering the curriculum ranged from 92% in grade 11 to 100% in grade 12. Overall, the stated evaluation objective for Mathematics was met and substantially surpassed in all grades.

TABLE IX

Science Performance

Number and Percent of Students Passing

Teacher-Made Examinations in Science

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
10	166	132	80%	232	228	98%
11	55	48	87%	42	41	98%
12	20	19	95%	10	10	100%

In the Fall term, the percentage of students passing teacher-made examinations in Science ranged from 80% in grade 10 to 95% in grade 12. In Spring, the percent mastering the curriculum ranged from 98% in grades 10 and 11 to 100% in grade 12. Overall, the stated evaluation objective for Science was met and substantially surpassed in grades 10, 11, and 12.

TABLE X

Social Studies Performance

Number and Percent of Students Passing

Teacher-Made Examinations in Social Studies

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
10	105	96	91%	185	175	95%
11	47	43	92%	56	55	98%
12	26	23	89%	20	20	100%

In the Fall term, the percentage of students passsing teacher-made examinations in Social Studies ranged from 89% in grade 12 to 92% in grade 11. In Spring, the percent mastering the curriculum ranged from 95% in grade 10 to 100% in grade 12. Overall, the stated evaluation objective for Social Studies was met and substantially surpassed in all grades.

TABLE XI

Native Language Performance

Number and Percent of Students Passing

Teacher-Made Examinations in Native Language Arts

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
10	152	148	97%	188	185	98%
11	28	28	100%	13	13	100%
12	4	4	100%	2	2	100%

In the Fall term, the percentage of students passing teacher-made examinations in Native Language Arts ranged from 97% in grade 10 to 100% in grades 11 and 12. In Spring, the percent mastering the curriculum ranged from 98% in grade 10 to 100% in grades 11 and 12. Overall, the stated evaluation objective for Native Language Arts was met and substantially surpassed in all grades.

TABLE XII

Attendance Rates

Number and Percent of Students

Surpassing the General School Attendance Rate, Reporting the Program

Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
10	262	98.4%	2.5	259	97.4%
11	60	98.4%	3.7	58	96.7%
12	26	96.0%	9.0	25	96.2%

The average attendance rates were very high at all grade levels; students exceeded 96% in attendance rates with little variability. The percentage of students exceeding the Seward Park general student attendance rate also exceeded 96%. Thus, the very high attendance rates among students strongly suggests a uniformly high motivation in program participation.

VII. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions:

The evaluator was familiar with Seward Park High School before he undertook the assignment to observe and review the Bilingual Program. He had acted as a bilingual and bicultural consultant on several projects connected with the program. Because the evaluator came from a bilingual family, and had the experience of going through the American (graduate) education system with imperfect mastery of English, he understood the plight of Chinese and other Asian immigrants who must enter classes taught by monolingual teachers, without the transitional step of a Bilingual Program.

In light of that experience, and after extensive conversations with the individuals involved in implementing the Program, the evaluator reached the following conclusions:

The records of Program students indicated that performance was at a relatively high level, and that students tended to be conscientious. Mastery of content area material was facilitated by the fact that students were exposed to English texts and Chinese translations; they therefore generally reviewed concepts at least twice.

The student outcome measures reported in the Findings section of this report reflect this mastery. While English language reading achievement was inadequately measured for 11th grade students as students performed at chance levels, 12th grade students showed high statistical and educational reading gains. Criterion referenced assessment in English language growth revealed good student progress. Greater than one objective per month of instruction was achieved in each term on the average. On a standardized test

of mathematics achievement (in English), students demonstrated statistically and educationally significant pre test to post test growth. On teacher made tests, students showed consistent performance far beyond expectation in tested areas of mathematics, science, social studies and native language arts. Attendance rates were exceptionally high in all grades (greater than 96%), suggesting very high levels of academic motivation.

The Program Coordinator and her staff, as well as the teaching staff and school administration, oriented students toward joining mainstream classes, rather than remaining isolated. In this sense, the goals of the Program were consistent with Federal, State, and City guidelines.

An effective working relationship has been established between the school personnel and the Title VII staff. In general, students and parents have confidence in the Program, and have a strong relationship with the Teachers, Specialists, Paraprofessionals, and the Program Coordinator. And in areas such as curriculum development the Program has functioned as an exemplary program in Chinese bilingual education. In general, the Program has achieved its overall goals.

B. Recommendations:

The evaluator recommends that:

1. Title VII funding be made available to extend the program for another five-year cycle. In view of New York City's increasing population of Chinese and other Asian students of limited English proficiency, the Program should be expanded. Furthermore, it should be treated as a Consortium Center so that increasing numbers of students and those who are more advanced could be served.

2. Program personnel continue and expand their efforts to open communication channels and increase intercultural understanding among the diverse and growing ethnic groups in the school and in the community.

3. Program personnel work toward improving and strengthening ties with Chairpersons and tax-levy Teachers from other departments to increase and develop their awareness of the backgrounds and needs of immigrant students, and the services offered them by the Bilingual Program.

4. The Bilingual Guidance Counselor be given increased assistance in handling the increasing demand for supportive services caused by the recent influx of new immigrants and the enrollment of their high-school aged children at Seward Park.

5. A new duplicating machine be purchased and installed, since the machine presently utilized cannot copy any material from bound books. This would facilitate development of curriculum materials.

6. The NYC Reading Test and the NYC Mathematics Test be reviewed to determine their adequacy for use with bilingual program students. The reading test proved too difficult for many program students who appear to be functioning below the floor of the test. Conversely, the mathematics test appears too simple for many students apparently functioning above the test ceiling. A review should be conducted to determine the extent of curriculum/test-content congruency. It is suspected that such a review may reveal the need to select new tests or apply different levels of the existing tests for the assessment of reading and mathematics skills of Chinese-speaking students.